

(19) **United States**(12) **Patent Application Publication****Kawada et al.**(10) **Pub. No.: US 2006/0122524 A1**(43) **Pub. Date: Jun. 8, 2006**(54) **PULSE WAVE TRANSMISSION DETECTION SYSTEM****Publication Classification**(51) **Int. Cl.****A61B 5/04** (2006.01)**A61B 5/02** (2006.01)(52) **U.S. Cl.** **600/513; 600/500**(75) **Inventors: Reiji Kawada, Kuga-gun (JP); Syoichi Takano, Hanno-shi (JP)****Correspondence Address:****SUGHRUE MION, PLLC****2100 PENNSYLVANIA AVENUE, N.W.****SUITE 800****WASHINGTON, DC 20037 (US)**(73) **Assignee: BML, INC., Tokyo (JP)**(21) **Appl. No.: 10/519,710**(22) **PCT Filed: Jul. 3, 2003**(86) **PCT No.: PCT/JP03/08477**(30) **Foreign Application Priority Data**

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(57) **ABSTRACT**

Provided is a pulse wave propagation detection system including electrocardiographic signal detection means, and eyeground image detection means for detecting an eyeground image in synchronization with an electrocardiographic signal detected through the detection means, which system further includes means for correlating a change in the diameter of an eyeground vein—which diameter is measured, at the optic papilla, by use of an eyeground image synchronized with an arbitrary electrocardiographic signal—with the state of pulse wave propagation through an intracerebral blood vessel or with the state of sclerosis of a capillary artery. Provision of the pulse wave propagation detection system; i.e., means for conveniently and accurately identifying the state of blood flow in the brain or the state of sclerosis of a capillary artery, enables prevention of adverse effects of, for example, excessive drop in blood pressure.

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